

EXECUTIVE OFFICER SUMMARY REPORT
September 14, 2005

ITEM: 11

SUBJECT: New NPDES Permit: City of Escondido, Industrial Brine Collection System -- Discharge to the Pacific Ocean via the San Elijo Ocean Outfall. Phase I of the IBCS will consists of a 12-inch diameter pressure pipeline that will serve the Palomar Energy Project (PEP). PEP is a 550-megawatt power plant currently being constructed by Palomar Energy LLC, owned buy an entity of Sempra Energy. (tentative Order No. R9-2005-0139, NPDES Permit No. CA0109215) (*Paul J. Richter*)

PURPOSE: To adopt waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for disposal to the Pacific Ocean of up to 1.5 million gallons per day (mgd) of brine wastewater from industrial users discharging to the City of Escondido's Industrial Brine Collection System.

PUBLIC NOTICE: The NPDES permit hearing notice was published in the North County Times on August 8, 2005 for the Regional Board meeting scheduled for September 14, 2005.

On August 8, 2005, copies of the tentative Order were mailed to the discharger and to all known interested parties and agencies. Copies were also made available for public review at the Regional Board office on August 8th. On August 9, 2005, copies of the tentative Order were sent via e-mail to the City of Escondido and to the *Palomar Energy Project* (PEP) and were posted on the Regional Board's web site. These actions implement the 40 CFR 124.10 requirements for a 30-day public notification for the tentative Order.

DISCUSSION: The City of Escondido (City) is the owner and operator of the Industrial Brine Collection System (IBCS), a pipeline collection system consisting of an equalization basin and dechlorination system. The City proposes to discharge up to 1.5 mgd of dechlorinated industrial brine wastewater from the IBCS to the Pacific Ocean via the Escondido Land Outfall (ELO) and the San Elijo Ocean Outfall (SEOO).

The City proposes to construct the IBCS in two phases. Phase I of the IBCS is a 12-inch diameter pressure pipeline that will receive wastewater discharges from the PEP. The PEP is a 550-megawatt power plant being constructed by Palomar Energy LLC, a Sempra Energy Development. The PEP will be a natural gas combined-cycle power plant and is scheduled to begin power generating testing operations in October 2005.

Phase II of the IBCS will include brine pipelines that receive industrial brine wastewater flow of approximately 0.10 mgd of cooling tower blowdown and brine wastewaters from the existing 49-megawatt cogeneration Iceoplex facility, and from two existing water softening companies, Culligan and Bancor. Phase II of the IBCS is scheduled for development within the next five years.

This tentative Order includes limitations and requirements for the City, its management, and operation of the IBCS, and its regulation of the industrial discharges to the IBCS. Brine wastewaters discharging into the IBCS may include:

1. Brine discharges from electrical generating stations including the evaporative cooling water blowdown and low volume waste stream processes, and
2. Brine discharges from water treatment processes such as filtration, reverse osmosis, and ionic exchange water softener processes.

The source water for the industrial facilities producing brine discharges may be either recycled water (i.e., tertiary treated wastewater from the City's municipal sewage plant delivered to the industrial facility) or potable water. The industrial processes that discharge to the IBCS concentrate the total dissolved solids (TDS, or salinity) in their source water.

Pursuant to 40 CFR 423.15, *new source performance standards* (NSPS), the *effluent limitation guidelines* (ELG) for steam electric power generating facilities have been established in this Order. Cooling tower blowdown, evaporative cooler blowdown, reverse osmosis brine, de-ionization brine, various low volume floor drain effluent, and heat recovery steam generator blowdown will be regulated in the permit in accordance with ELG.

The ELG prohibit the discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

All other wastes from the PEP, including drains located in areas of chemical storage and those subject to discharges of oily discharges from the PEP facility will be discharged to the sanitary sewer system. The industrial waste discharged to the sanitary sewer from the PEP will be regulated by the City's industrial pretreatment program.

The IBCS does not receive any domestic wastewater (i.e., sanitary sewage). The IBCS wastes do not need to be treated by a municipal sewage treatment plant, and the IBCS is not a part of the sanitary sewage collection system for the City's wastewater treatment plant, the Hale Avenue Resource Recovery Facility (HARRF).

The IBCS discharge will be dechlorinated at the HARRF prior to mixing with the wastewater discharges (treated sewage) from the HARRF. The dechlorination facility for the IBCS discharges will be separate from the sewage treatment processes at the HARRF. The chlorine in the brine is from the chlorine used in the cooling tower operations. A secondary source of chlorine is from the recycled wastewater supplied from the HARRF to the PEP.

The IBCS flow will be contained in an equalization basin that discharges into the ELO and to the SEOO. By using an equalization basin, the City will be able to control the flow rate of the IBCS into the ELO, and subsequently into the SEOO.

Tentative Order No. R9-2005-0139 includes effluent limitation guidelines specified in *40 CFR 423, Steam Electric Power Generating Point Source Category*, and effluent limitations from the *1994 Water Quality Control Plan for the San Diego Basin*, the *2001 Water Quality Control Plan for Ocean Waters of California* and the *1972 Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California*.

As of August 31, 2005, we have received one comment letter from Palomar Energy Project. A copy of this letter is included in this agenda package. We have also included a copy of a letter date June 2, 2005 from the USEPA regarding the implementation of the ELG and development of the limitations in the tentative Order. Written responses to comments received will be provided in the supplemental agenda mailing of material to the Regional Board.

Additional information for the facility and the requirements for the tentative Order are included in the Fact Sheet, Attachment F.

KEY ISSUES:

For the discharges from the PEP to the IBCS, the tentative Order includes effluent limitations as specified by *40 CFR 423, Steam Electric Power Generating Point Source Category*. The tentative Order allows an adjustment in the effluent limitations for the total suspended solids (TSS) concentration in the low volume wastes discharges from the PEP if the quality of the source water (recycled water) for the PEP operations has high TSS concentrations.

LEGAL CONCERNS:

None.

**SUPPORTING
DOCUMENTS:**

1. Location map.
2. Tentative Order No. R9-2005-0139.
 - i. Attachment A - Definitions
 - ii. Attachment B – IBCS Map
 - iii. Attachment C – Wastewater Flow Diagram
 - iv. Attachment D – Federal Standard Provisions
 - v. Attachment E – Monitoring and Reporting Program
 - vi. Attachment F – Fact Sheet
 - vii. Attachment G – Dilution Model Summary
 - viii. Attachment H – Priority Pollutants
 - ix. Attachment I – Effluent Adjustment for TSS
3. Transmittal letter dated August 8, 2005.
4. Comment letter from Palomar Energy Project dated August 29, 2005.
5. Letter from USEPA dated June 2, 2005.
6. Affidavit of Publication for public notice dated August 8, 2005.

**SIGNIFICANT
CHANGES:**

NA

**COMPLIANCE
RECORD:**

NA

RECOMMENDATION:

Adoption of tentative Order No. R9-2005-0139, NPDES Permit No. CA0109215 is recommended.